DATA SHEET

Enova® DGX 32 Enclosure

AVS-ENOVADGX32-ENC-A (FG1059-33)



Overview

The new Enova DGX 32 Enclosure (AVS-ENOVADGX32-ENC-A) includes higher wattage power supplies to increase the number of devices that can be powered over DXLink by the enclosure. This robust Digital Media Switcher includes an integrated NetLinx Controller, redundant power supplies and can be populated with Enova DGX video input and output boards in addition to optional audio insert/extract boards. There are four connections per video board, and each enclosure holds eight video input boards and eight video output boards for a maximum matrix of 32 x 32. The Enova DGX 32 is capable of supporting 4K and Ultra High Definition (UHD) content.

The Enova DGX 32 is far beyond a modular media switcher with built-in controller - it functions as the centerpiece of a complete integrated solution that manages and distributes analog and digital audio and video including HDMI/HDCP, control and Ethernet. Easily integrate HDCP into system designs and enjoy hassle-free plug-and-play operation. No tools, no delays and no key constraints – it just works with AMX's exclusive InstaGate Pro® Technology. Built for today's and tomorrow's needs, a comprehensive set of Enova DGX hot swappable boards can be used in conjunction with DXLink and DGX Transmitters and Receivers to provide an end-to-end distribution system over twisted pair cable or fiber. An integrated NetLinx Controller and embedded Ethernet switch enables management of the entire solution including source equipment and display devices located throughout the environment – all from a single point of control.

In addition to eliminating HDCP delays, InstaGate Pro allows traditionally key limited sources to be switched freely to all connected HDCP compliant displays – eliminating HDCP key limitations that plague large applications. Built-in SmartScale® Technology on every output provides video that is perfectly scaled for each connected display,

eliminating the integration challenges that can occur when sources and displays have different supported resolutions - making it easy to specify, easy to install and easy to use. With the powerful combination of analog-to-digital signal conversion, video scaling and high speed digital switching the system delivers perfect video every time – regardless of signal type.

As part of a complete distribution system, easily send analog or digital audio and video including HDMI with HDCP signals, plus control 10 Km over single mode fiber or 300 meters over multimode fiber; send all this plus power up to 100 meters over standard twisted pair cable to and from the Enova DGX using the DXLink Twisted Pair and Fiber Transmitters/Receivers.

Common Applications

The Enova DGX 32 is ideal for commercial or residential installations requiring the highest quality video to be shared between 32 local or remote AV sources and destinations. Compact form factor allows for installation in locations where space is limited and included redundant power supplies provides for constant uptime for mission critical applications.

Features

- **HDMI/HDCP Switching with Simplicity of Analog** – End-to-end distribution of HDMI/HDCP without interruption or key constraints using InstaGate Pro Technology
- **4K and Ultra High Definition (UHD) Content Ready** – Designed to support future resolutions for years to come
- **HDCP Compliance Over Fiber** – Compatible DXLink Fiber boards transmit uncompressed video, including HDCP protected content, up to 10 Km at 10 Gbps (single mode fiber options transmit 10 Km, multimode 100 m)
- **Fiber Your Way** – DXLink Fiber boards are available in single mode or multimode; simplex or duplex to meet the needs of any installation
- **AV and Control over Twisted Pair, Fiber or Both** – Send audio, video, bi-directional control and Ethernet over twisted pair or fiber cable, or integrate both into the same system
- **Embedded NetLinx Controller** – Allows any connected device to be managed, monitored or controlled
- **Integrated Ethernet Switch** - Pass Ethernet through the attached DXLink Twisted Pair or Fiber Transmitters or Receivers
- **Analog to Digital Video Conversion with Scaled Outputs** – Converts any source signal to digital and uses SmartScale Technology to automatically output video that is perfectly scaled for each connected display
- **6 RU Enclosure** – Comparatively speaking, that's half the space of the competition

Key Dealer Benefits

- **HDCP With Simplicity of Analog –** Hassle-free plug-and-play operation eliminates the need for time-consuming, cumbersome work around tools to deal with HDCP key constraints and resolution incompatibilities
- **All-In-One Control and Distribution Solution –** Powerful combination of modular matrix switcher, built-in controller, embedded Ethernet switch and video scaling on every output simplifies the end-to-end distribution and management of audio, video and control throughout multiple rooms
- **Fast Easy Installation –** Leverage pre-existing standard twisted pair infrastructure to distribute high-definition video, audio, control and Ethernet

Key Customer Benefits

- **Picture Perfect –** Prevents degraded video due to incompatibilities between different display resolutions by scaling the video to match each display's preferred resolution using innovative SmartScale Technology
- **Interruption-Free Content –** Exclusive InstaGate Pro Technology allows audio and video to be switched quickly and easily to every connected display without the difficulties typically associated with HDCP

- **Audio, Video and Control Everywhere –** Provides end-to-end distribution of audio, video and control signals throughout a residence or commercial facility over one twisted pair cable

Additional Features

- **InstaGate Pro Technology** – Easily integrate HDCP into system designs and enjoy hassle-free matrix switching to all compliant displays. No tools, no delays, and no key constraints – it just works
- **SmartScale Technology** – Automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup; this prevents inferior video quality when sources are forced to lower resolutions to support the least capable display in the system
- **DXLink Twisted Pair Input and Output Boards** – HDCP Compliant boards send audio, video, control, Ethernet and power over one standard twisted pair cable up to 200m – 100m to the matrix switcher and 100m after the matrix switcher, see the Cabling for Success with DXLink white paper for more details
- **Built-in NetLinx Controller** – Easily program and manage the entire solution including source equipment and display devices located across multiple rooms – all from a single point of control
- **Easily Convert Analog to Digital Signals** – Use the Enova DGX Digital Media Switcher in conjunction with DXLink Multi-Format Transmitters (Twisted Pair or Fiber), and easily integrate legacy analog sources and automatically convert their signals to digital
- **Hot Swappable Video Input / Output Boards** – Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards
- **Audio Insert / Extract Boards** – Add audio from a local source or extract embedded audio and send to a separate audio system to distribute throughout an environment
- **3D Support** – Pass through latest video formats including 3D and Deep Color
- **Surround Sound Support** – Pass through high definition surround sound including Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH thorough 8 CH L-PCM
- **High Speed Digital Switching** – 12.8 Gbps ensures perfect pixel for pixel reproduction of video
- **Fully Redundant Power Supplies with Independent Power Paths** – ensures maximum reliability for applications that require 24/7 uptime

Specifications

GENERAL	
Supported Signal Styles/Compatible Input and Output Boards	For supported signal styles please see the data sheets for Enova DGX compatible Input / Output Boards: •AVS-ENOVADGX32-VI-HDMI, Enova DGX HDMI Input Board (FG1058-540) •AVS-ENOVADGX32-VO-HDMI, Enova DGX HDMI Output Board (FG1058-550) •AVS-ENOVADGX32-VI-DVI, Enova DGX DVI Input Board (FG1058-600) •AVS-ENOVADGX32-VO-DVI, Enova DGX DVI Output Board (FG1058-610) •AVS-ENOVADGX32-VI-DXLINK, Enova DGX DXLink Twisted Pair Input Board (FG1058-570) •AVS-ENOVADGX32-VO-DXLINK, Enova DGX DXLink Twisted Pair Output Board (FG1058-580) •ENOVADGX-VI-DXLINK-MMF-D, Enova DGX DXLink Multimode Fiber Input Board, Duplex (FG1058-622) •ENOVADGX-VO-DXLINK-MMF-D, Enova DGX DXLink Multimode Fiber Output Board, Duplex (FG1058-632) •ENOVADGX-VI-DXLINK-MMF-S, Enova DGX DXLink Multimode Fiber Input Board, Simplex (FG1058-623) •ENOVADGX-VO-DXLINK-MMF-S, Enova DGX DXLink Multimode Fiber Output Board, Simplex (FG1058-633)

	•ENOVADGX-VI-DXLINK-SMF-D, Enova DGX DXLink Single Mode Fiber Input Board, Duplex (FG1058-620) •ENOVADGX-VO-DXLINK-SMF-D, Enova DGX DXLink Single Mode Fiber Output Board, Duplex (FG1058-630) •ENOVADGX-VI-DXLINK-SMF-S, Enova DGX DXLink Single Mode Fiber Input Board, Simplex (FG1058-621) •ENOVADGX-VO-DXLINK-SMF-S, Enova DGX DXLink Single Mode Fiber Output Board, Simplex (FG1058-631) •AVS-ENOVADGX32-AUD-INS-EXT, Enova DGX Audio Insert / Extract Board (FG1058-700)
Dimensions (HWD)	10 1/2" x 19” x 20” (26.54 cm x 48.3 cm x 51 cm)
Dimensions (HWD) with Extractors	10 1/2" x 19” x 21” (26.54 cm x 48.3 cm x 53.54 cm)
Rack Units	6
Weight	Approximately 73 lbs (33.1 kg) per loaded enclosure
Shipping Weight	Approximately 83 lbs (37.6 kg) per loaded enclosure
MTBF	92,000 hours
Per Channel Aggregate Data Rate (Max)	12.8 Gbps
Noise Level	< 54 dBA @ 1m (Typical @ 25°C)
Airflow	Forced Air (inlet on sides, exhaust on back & top)
Regulatory Compliance	CE EN 55022, EN 55024 and EN 60950-1 UL 60950-1 FCC Class A cUL RoHS / WEEE compliant IEC 60950-1
Recommended Accessories	•EXB-IRS4 ICSLan IR/S Interface, 4 IR/S and 4 Inputs (FG2100-23) •EXB-COM2 ICSLan Serial Interface, 2 Ports (FG2100-22) •EXB-REL8 ICSLan Relay Interface, 8 Channels (FG2100-20) •EXB-I/O8 ICSLan Input/Output Interface, 8 Channels (FG2100-21) •EXB-MP1 ICSLan Multi-Port, 1 COM, 1 IR/S, 2 I/O, 1 IR RX (FG2100-26) •CBL-HDMI-FL HDMI High Speed Flat Cable with RedMere Technology (FG10-2180-16) •CBL-RGB+A-FL RGB with Audio Flat Cable (FG10-2183-16) Note: Compatible boards are listed above under “supported signal styles/compatible input and output boards”. Transmitter and receiver compatibility is dependent on board selection, please see the data sheet for the selected board for compatible transmitters and receivers.

ACTIVE POWER REQUIREMENTS	
AC Power	100-240 VAC single phase, 50-60 Hz
Power Consumption (Max)	1379 Watts, with redundancy 2758 Watts, without redundancy
Power Consumption (Typ)	585 Watts, fully loaded HDMI enclosure with redundancy
Power Consumption w/DXLink Power (Typ)	1751 Watts, fully loaded DXLink Power enclosure without redundancy Use the Enova DGX Configuration Tool located at AMX.com/enova to determine the power

	requirements of a configuration and whether any of the DXLink Transmitters or Receivers should be powered with the local power supply to maintain PS redundancy in the Enova Enclosure
Power Factor Correction	Supported, complies with EN60555-2 and EN61000-3-2

USB (HID) KEYBOARD & MOUSE	
USB (HID)	Use the Enova DGX Digital Media Switcher in conjunction with DXLink Transmitters and Receivers (twisted pair and/or fiber), connect a DXLink Transmitter to a PC and a DXLink Receiver to a keyboard and mouse, the system then emulates commands from the receiver back to the PC

ENVIRONMENTAL	
Heat Dissipation (Max)	4705 BTU/hr, with redundancy 9410 BTU/hr, without redundancy
Heat Dissipation (Typ)	1996 BTU/hr, fully loaded enclosure with redundancy
Heat Dissipation w/DXLink Power (Typ)	5975 BTU/hr, fully loaded DXLink Power enclosure without redundancy Use the Enova DGX Configuration Tool located at AMX.com/enova to determine the power requirements of a configuration and whether any of the DXLink Transmitters or Receivers should be powered with the local power supply to maintain PS redundancy in the Enova enclosure
Humidity (Operating)	5% to 85% RH (non-condensing)
Humidity (Storage)	0% to 90% RH (non-condensing)
Temperature (Operating)	32° to 104° F (0° to 40° C)
Temperature (Storage)	-22° to +158° F (-30° to +70° C)

INTEGRATED CONTROLLER	
LAN/Ethernet Port	NetLinx On Board Master is an NI-3100 Class Controller TCP/IP Uplink Port (LAN 10/100/1000) Supports up to 64-Port Unmanaged 10/100 Ethernet Switch (Cascaded architecture actual throughput dependent on loading. Worst case per port throughput 10 Mbps, best case 100 Mbps when used with 32 DXLink Transmitters and 32 DXLink Receivers) Static IP or DHCP/DNS, SSL, Auto-negotiating, Half/Full duplex, Auto MDI/MDI-X Cross-Over TCP/IP, UDP/IP, CIP, SMTP, SNMP, Built-in Web server Includes support for DXLink Devices RJ-45 Connector
Processor	CPU 404 MIPS PowerPC
Memory	SDRAM 256 MB NVRAM 1 MB Flash 2 GB
Program Port (USB)	USB Mini-AB (used for NetLinx Studio control)

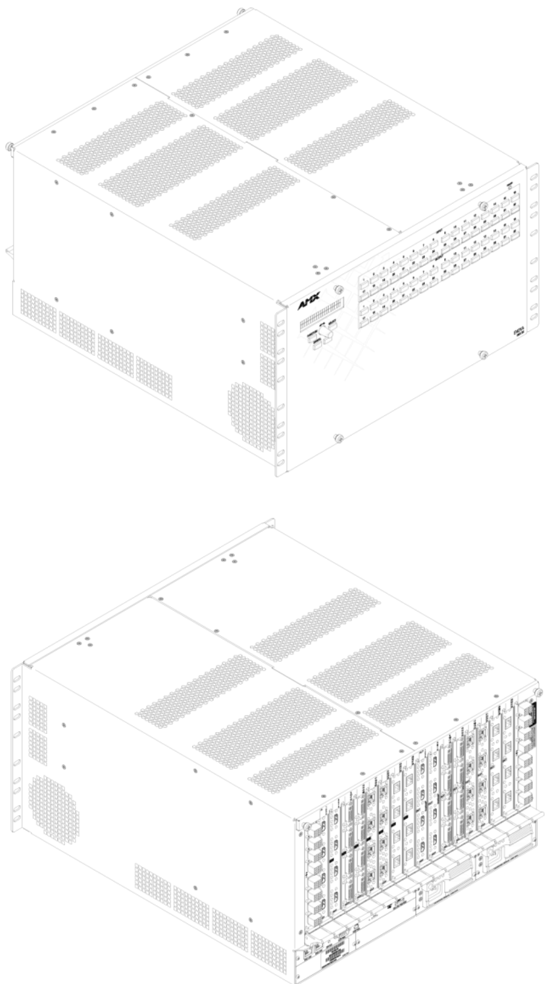
ENCLOSURE CONTROL	
Control Port (Serial)	Bidirectional RS-232 Baud Rates of 9600 (default), 19200, 38400, 57600 DB-9 Connector
Control Port (USB)	USB Mini-B

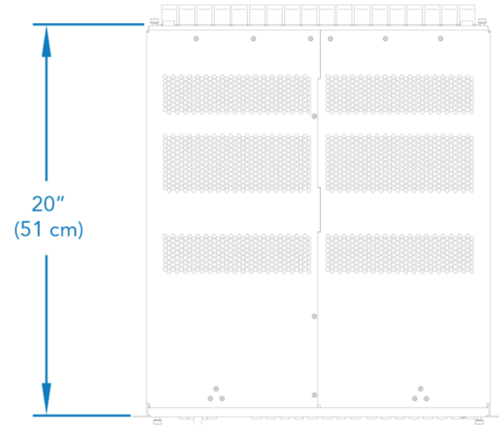
For a detailed PDF or DXF pictorial drawing please visit: http://www.amx.com/products/AVS-ENOVADGX32-ENC-A.asp

For audio, video and signal transport specifications please see compatible input / output board data sheets:

Compatible Boards

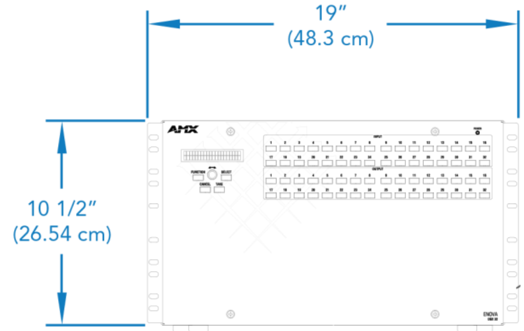
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AVS-ENOVADGX32-AUD-INS-EXT, Enova DGX Audio Insert / Extract Board	**(FG1058-700)**



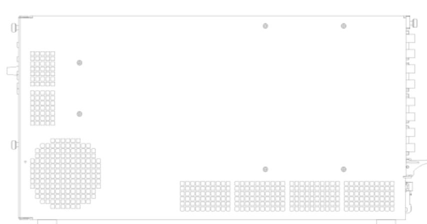


AVS-ENOVADGX32-ENC
(Top View)

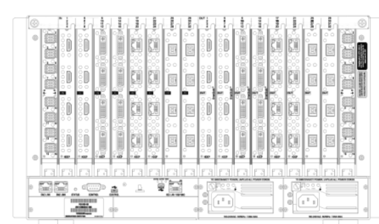
AVS-ENOVADGX32-ENC
(Isometric Views)



AVS-ENOVADGX32-ENC
(Front View)



AVS-ENOVADGX32-ENC
(Right View)



AVS-ENOVADGX32-ENC
(Back View)

About AMX

AMX hardware and software solutions simplify the implementation, maintenance, and use of technology to create effective environments. With the increasing number of technologies and operating platforms at work and home, AMX solves the complexity of managing this technology with reliable, consistent and scalable systems. Our award-winning products span control and automation, system-wide switching and audio/video signal distribution, digital signage and technology management. They are implemented worldwide in conference rooms, homes, classrooms, network operation / command centers, hotels, entertainment venues, broadcast facilities, and more.

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AMX.com | 800.222.0193 | 469.624.8000 | +1.469.624.7400 | fax 469.624.7153